



1765

PATENT

#10

THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant: E. Morita

Serial No.: 09/726,860

Filed: November 30, 2000

For: METHOD OF MANUFACTURING  
CRYSTAL OF III-V COMPOUND OF THE  
NITRIDE SYSTEM, CRYSTAL  
SUBSTRATE OF III-V COMPOUND OF  
THE NITRIDE SYSTEM, CRYSTAL FILM  
OF III-V COMPOUND OF THE NITRIDE  
SYSTEM, AND METHOD OF  
MANUFACTURING DEVICE

Case No.: 9792909-4715

Examiner: M. Anderson

Group Art Unit: 1765

**Certificat of Mailing (37 CFR 1.8(a))**

I hereby certify that this paper (along with  
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*Jo Ellen Hogan*  
Jo Ellen Hogan

*5/2/02*  
Date

**TRANSMITTAL LETTER**

Box Non-Fee Amendment  
Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Enclosed herewith is a Response B and Second Election of Species of E.  
Morita in the above-identified patent application.

Also enclosed are: Information Disclosure Statement  
Information Disclosure Statement Transmittal  
PTO 1449  
One copy of 11 references  
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The Commissioner is hereby authorized to charge any additional fees  
required, as well as any patent application processing fees associated with this  
communication for which full payment has not been tendered, to Deposit Account  
No. 19-3140. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

SONNENSCHN NATH & ROSENTHAL

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:  
SERIAL NO.:  
FILING DATE:  
INVENTION:

E. Morita  
09/726,860  
November 30, 2000

ATTORNEY DOCKET NO. 9792909-4715  
GROUP ART UNIT: 1765  
EXAMINER: M. Anderson

METHOD OF MANUFACTURING CRYSTAL OF III-V COMPOUND OF THE  
CITY OF PATENTS  
ORIGINAL SYSTEM...

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

COMMISSIONER OF PATENTS  
Washington, D.C. 20231

Sir:

Submitted herewith is an Information Disclosure Statement for consideration in the above-identified application. This Information Disclosure Statement is submitted:

- ☒ Within 3 months (1) of filing date of a national application; (2) of date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application; or (3) before the mailing date of a first Office Action on the merits, whichever occurs last. (No fee is required.)
- ☐ After the mailing date of a first Office Action but before (1) mailing of a final action under 37 C.F.R. §1.113; or (2) mailing of a notice of allowance under §1.311, whichever occurs first.
- ☐ Payment for the fee set forth in 37 C.F.R. §1.17(p) accompanies this submission; or
- ☐ The certification specified in 37 C.F.R. §1.97(e) is made below. (No fee is required.)
- ☐ After the mailing of (1) a final action under 37 C.F.R. §1.113; or (2) a notice of allowance under 37 C.F.R. §1.311 whichever occurs first, but **before** payment of the issue fee. The certification specified in 37 C.F.R. §1.97(e) is made below. The Commissioner hereby is petitioned to consider the Information Disclosure Statement accompanying this submission. Payment for the Petition fee set forth in 37 C.F.R. §1.17(i)(1) accompanies this submission.
- ☐ The undersigned counsel for applicant(s) hereby certifies each item of information identified in the Information Disclosure Statement was first cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- ☐ The undersigned counsel for applicant(s) hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign Patent Office in a counterpart foreign application, or to the knowledge of the undersigned, after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
- ☐ A check in the amount of \$\_\_\_ to cover any required fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 19-3140. *A duplicate copy of this sheet is enclosed for this purpose.*

Very respectfully,

SONNENSCHN NATH & ROSENTHAL

By Shashank Upadhye Reg. 48,209  
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CERTIFICATE OF MAILING

I hereby certify that this Information Disclosure Statement is being deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner of Patents at the United States Patent and Trademark Office in Washington D.C. on 5/2, 2002.

Jo Ellen Hogan  
Jo Ellen Hogan



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENTAPPLICANT(S): <sup>COPY OF PAPERS</sup>  
<sup>ORIGINALLY FILED</sup> E. Monta

DOCKET NO.: 9792909-4715

SERIAL NO.: 09/726,860

GROUP ART UNIT: 1765

DATE FILED: November 30, 2000 EXAMINER: M. Anderson

INVENTION: METHOD OF MANUFACTURING CRYSTAL OF III-V  
COMPOUND OF THE NITRIDE SYSTEM, CRYSTAL  
SUBSTRATE OF III-V COMPOUND OF THE NITRIDE SYSTEM,  
CRYSTAL FILM OF III-V COMPOUND OF THE NITRIDE  
SYSTEM, AND METHOD OF MANUFACTURING DEVICE

Commissioner for Patents  
Washington, DC 20231

S I R:

In accordance with the provisions of 37 C.F.R. § 1.56, Applicants request that citation and examination of the references identified on the attached PTO-1449 form, copies of which are enclosed herewith in accordance with 37 C.F.R. §1.98, be made during the course of examination of the above-referenced application for United States Letters Patent.

I. SUBMITTED UNITED STATES PATENT REFERENCES

<u>Reference</u>	<u>Number</u>	<u>Patentee</u>	<u>Issue Date</u>
	6,051,849	David, et al.	April 18, 2000

II. SUBMITTED FOREIGN PATENT REFERENCES

<u>Reference</u>	<u>Number</u>	<u>Country</u>	<u>Date of Publication</u>
	0942459	EP	15 September 1999
	10-312971	JP	24 November 1998
	11-126948	JP	11 May 1999

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III OTHER DOCUMENTS

- | <u>Reference</u> | <u>Title/Author</u>   |
|------------------|---|
|                  | Zheleva, et al., Pendeo-Epitaxy - A New Approach for Lateral Growth of Gallium Nitride Structures, <i>MRS Internet J. Nitride Semicond. Res.</i> 4S1, G3.38 (1999).   |
|                  | Thompson, et al., Ranges of Deposition Temperatures Applicable for Metalorganic Vapor Phase Epitaxy of GaN Films via the Techique of Pendeo-Epitaxy, <i>MRS Internet J. Nitride Semicond. Res.</i> 4S1, G3.37 (1999). |
|                  | T. Gehrke, et al., Pendeo-Epitaxy of Gallium Nitride and Aluminum Nitride Films and Heterostructures on Silicon Carbide Substrate, <i>MRS Internet J. Semicond. Res.</i> 4S1, G3.2 (1999).                            |
|                  | K. Linthicum, et al., Process Routes for Low Defect-Density GaN on Various Substrates Employing Pendeo-Epitaxial Growth Techniques, <i>MRS Internet J. Nitride Semicond. Res.</i> 4S1, G4.9 (1999).                   |
|                  | T. Zheleva, et al., Dislocation Density Reduction via Lateral Epitaxy in Selectively Grown GaN Structures, <i>Appl. Phys. Lett.</i> 71 (17), 27 October 1997.   |
|                  | K. Linthicum, et al., Pendeoepitaxy of Gallium Nitride Thin Films, <i>Appl. Phys. Lett.</i> 75 (2), 1999.   |
|                  | T. Zheleva, et al., Pendeo-Epitaxy: A New Approach for Lateral Growth of Gallium Nitride Films, <i>J. Electronic Materials</i> , 28 (4), 1999.  |

IV. EXPLANATION OF RELEVANCE

The references disclose relevant art.

Submitted by,

 (Reg. 48,209)

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